

FY15 Chief of Naval Operations Environmental Award Environmental Quality, Non-Industrial Installation

Naval Medical Center Portsmouth, Virginia Narrative Summary

INTRODUCTION

Mission

Naval Medical Center Portsmouth (NMCP) delivers healthcare to over 420,000 beneficiaries – to include active-duty, retirees, and eligible family members in the Hampton Roads area. In addition it is one of two naval medical centers that support medical education and research.

NMCP's Mission Statement:

The pinnacle of military medical excellence, we support global health engagement and kinetic operations worldwide. We maximize warfighter and family readiness through quality patient-centered healthcare, medical education, and research.

Geographic and Community Setting

Known as Navy Medicine's "First and Finest", NMCP is the U.S. Navy's oldest continuously operating hospital. Added to the National Register of Historic Places in 1972, NMCP's Building 1 began providing healthcare services in 1830 and continued until 1999 when the Charette Health Care Center opened. It is currently used for administrative support to the medical center. Another important cultural resource is a historic cemetery with over 800 grave sites.



Figure 1: Portsmouth Naval Hospital Historic District, Building 1

Naval Medical Center Portsmouth now provides healthcare to all of service members and their families assigned to a Hampton Roads naval installation, the largest military concentration in the world. It is homeport to the majority of the 186 ships, 1,300 aircraft and 118,000 Sailors and Marines assigned to the Atlantic Fleet.

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Naval Medical Center Portsmouth's facilities span from its main campus on Hospital Point in Portsmouth, Virginia to seven Naval Branch Health Clinics (NBHCs) located throughout naval installations in Hampton Roads, Virginia; and two Tricare Prime Clinics in the cities of Virginia Beach and Chesapeake, Virginia. The main campus is located on the Portsmouth Annex of Naval Support Activity Hampton Roads (NSAHR). The seven NBHCs are located on Norfolk Naval Station, Joint Expeditionary Base Little Creek-Fort Story, Naval Air Station Oceana and its Dam Neck Annex, Norfolk Naval Shipyard, Naval Weapons Station Yorktown, and the Northwest Annex of NSAHR.



Figure 2: Portsmouth Naval Hospital Historic District, Naval Cemetery with over 800 graves

Naval Medical Center Portsmouth's facilities include five buildings totaling 1.7 million square feet (SF) on the main campus with the area clinics adding an additional 1 million SF. Geographically located in the southeastern corner of the Commonwealth of Virginia on the southern branch of the Elizabeth River at the confluence of

Scott Creek, the main campus encompasses 111 acres, central energy plant, a child development center, several recreation centers, maintenance shops, barracks, offices buildings, and a fire station.

The total staff of NMCP is approximately 5,000, and provides a wide range of in-patient, out-patient, and ancillary services to over 420,000 beneficiaries consisting of active duty and retired military personnel, and eligible military family members. The main campus has several primary and specialty care clinics, emergency room, radiology services, 21 operating rooms, and 202 staffed beds.

BACKGROUND

Naval Medical Center Portsmouth effectively integrates the delivery of quality patient-centered care with ensuring environmental compliance, seeking pollution prevention and diverting solid waste from the landfill. As part of the healthcare industry, NMCP has to maintain excellence in how it treats its waste due to: (1) public perception; (2) regulations; and (3) accreditation standards.

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The healthcare industry faced scrutiny in the 1980s when isolated incidents of medical waste were found along the shoreline of the East Coast. In response to the public's concern on the potential hazards of improperly disposed medical waste, Congress passed the Medical Waste Tracking Act in 1988, which resulted in the Environmental Protection Agency (EPA) defining medical waste and establishing management requirements. State regulatory agencies have since adopted their own regulations that they enforce. In addition to the regulatory agencies, the healthcare industry's most common hospital accreditation agency, The Joint Commission (TJC) (used by all Military Treatment Facilities [MTFs] within Navy Medicine) reviews each MTF's environmental program to ensure compliance with federal and state regulations during its triennial surveys.

Naval Medical Center Portsmouth's Environmental Program Manager (EPM) oversees the EMS program for the Commanding Officer and works within the Base Operations Department within the Directorate for Administration. The EPM participates in multiple multi-disciplinary teams affect the entire command, integrated into the day-to-day operations and long-term planning of the medical center.

SUMMARY OF ACCOMPLISHMENTS

Program Management

The EPM participates in environmental rounds where a different work center, clinic, or nursing unit is evaluated every week. The EPM discusses environmental programs and initiatives with the staff, and provides any on-the-spot training or guidance, as needed. Upon conclusion of the visit, findings and comments are immediately briefed to the Executive Officer.

A key player in executive committee chartered to support the Environment of Care accreditation standards, the EPM develops an annual management plan that evaluates areas for improvement on waste management (e.g. hazardous, regulated medical waste, and solid) and develops process improvement projects, which are briefed to the Commanding Officer.

The Commanding Officer's Environmental Policy statement and environmental posters are displayed throughout the facilities on all staff bulletin boards and SharePoint. The EPM provided "Green Binders" to all of the outlying clinics that provide the clinical staff a quick reference for processes, copies of any applicable environmental permits, and points of contact. NMCP's EMS program provides full visibility into its environmental programs.

Technical Merit and Orientation to the Mission

Integrating quality patient-centered healthcare, environmental compliance and pollution prevention often presents a challenge; however, NMCP continues to effectively accomplish all three objectives. Naval Medical Center Portsmouth met the objectives of its pollution prevention program by successfully reducing: (1) potentially infectious medical waste, known as Regulated Medical Waste (RMW); (2) Hazardous Waste (HW); and (3) pollutants discharged into the waste water.

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Drastically Reduced Regulated Medical Waste

Despite the increase in healthcare delivery, NMCP greatly reduced the amount of RMW over the past several years. RMW is a significant waste stream at any healthcare facility. Since 2012, NMCP reduced the amount of RMW generated. See Table 1 for details. In FY15, NMCP generated 36% less RMW than FY14. This reduction can be attributed to weekly environmental rounds and greater staff awareness through the efforts of the EPM. In addition, NMCP uses reusable sharps containers, which minimizes the amount of RMW. The alternative is to discard the containers for used needles, empty glass vials, and other potentially infectious items, and have them incinerated with the rest of the RMW. However, NMCP has the containers disinfected and returned for reuse.

Table 1: Regulated Medical Waste Generated from Naval Medical Center Portsmouth

Fiscal Year	RMW Generated (lbs)	Reduction from Previous Year
2012	213,041	8%
2013	206,655	3%
2014	212,965	-3%
2015	136,303	36%

Effectively Managed Hazardous Waste

NMCP operates multiple medical laboratories that support the healthcare of its 420,000 patients. As most healthcare laboratories, a significant amount of hazardous waste is generated. Recently, New Leica tissue processors reduced the amount of alcohol and xylene generated, thereby contributing to a decrease in those wastes. New initiatives for methanol reduction are part of the overall goals and target objectives for reduction opportunities in P2.

Eliminated Multiple Pollutants Discharged into the Wastewater System

In an effort to minimize hospital acquired infections and maintain compliance with infection control procedures, healthcare facilities are known to use harsh chemicals that pollute wastewater systems. Naval Medical Center Portsmouth works well with the Hampton Roads Sanitation District (HRSD) and seeks better ways to reduce the pollutants introduced into the wastewater.

Recently, NMCP switched to Cidex-OPA, a glutaraldehyde-free high-level disinfectant (HLD), used to disinfect endoscopes and other healthcare instruments. In addition to the reduced occupational hazard, Cidex-OPA is less harsh on the sanitary system.



Figure 3: Housekeeping cart that utilizes Equodose

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Automatic neutralization carts pump glycine to neutralize the solution before it is discarded into the wastewater system.

Working with our housekeeping contractor, NMCP implemented the “Equodose” waterless mopping system in March 2015. An innovative mechanical dosing device wets the mops just enough as required by the cleaning service. In addition to improving infection control practices, there is no discharge into the sanitary system unlike a traditional wet mopping system.

In March 2015, NMCP established a working group to improve the management of all hazardous materials in use at the medical center. Reviews of the Authorized User List (AUL) were implemented to minimize the number of hazardous materials, examine the environmental affects, and propose alternatives. Safety, Industrial Hygiene, Environmental, and Supply personnel are now part of the review process to add any hazardous material to the AUL. Naval Medical Center Portsmouth reviews products likely to be discharged to the sanitary sewer system have appropriate pH and metal content, contain minimal phosphate, and are not listed on the “HRSD Products Prohibited from Unrestricted Discharge” list.

Solid Waste Diversion



Figure 4: Single-use medical devices stored before being sent off-site for reprocessing

resulting in a cost avoidance of \$188,820. Blue wrap, used to wrap sterile instruments, generated 5,197 pounds with a cost savings of \$1,085. In addition, single-use medical devices (e.g., Arthroscopic Shavers, and Burs) are sent off-site for reprocessing and remanufacturing. This waste diversion route resulted in a cost savings of \$692,493 in FY15.

Naval Medical Center Portsmouth actively participates in the Commander, Navy Region Mid-Atlantic’s Qualified Recycling Program which consists of the collection, segregation and sale of scrap metal, aluminum cans, steel cans, cardboard, paper, lead-acid batteries and other commonly recyclable items. The medical center operates a shredding work center, staffed by Sailors, that processes hundreds of pounds of paper that contain Personal Health Information. The paperwork is centrally shredded so that it can be properly processed for recycling avoiding the landfill, like a lot of shredded material.

Naval Medical Center Portsmouth recycles several solid waste streams generated from patient care services. The total weight of plastic, white cardboard, and recyclable curtains generated in FY15 was 629,400 pounds,

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Being a hospital, there is a lot of food waste that is diverted from the landfill. It is sent through an aerobic food processor at an average rate of 50 pounds of food waste per hour. It is operated 12 hours per day, 7 days a week, and has diverted 218,400 lbs. of food waste to the landfill annually. Located within the Galley, the aerobic food processor turns the food into an effluent safe to discharge into the waste water system. This system has eliminated the need for any trucks to remove food waste.

Transferability and Stakeholder Interaction

Promoting Environmental Awareness



Figure 5: Earth Day displays at Naval Medical Center Portsmouth, 7 May 2015

Over the past year, multiple events have been held on NMCP's main campus in conjunction with NSAHR Environmental and Energy staff. On 7 May 2015, NMCP hosted its Earth Day Fair outside the Navy Exchange in Building 3 with several educational displays on the Navy's Environmental and Energy programs. In addition, courtesy of the Department of Forestry, over 50 tree seedlings were distributed to onlookers. On 25 October 2015, NMCP hosted an Environmental and Energy Awareness Fair where the EPM presented the Navy's Energy Program and Recycling Program and fielded questions. Personnel from NMCP participated in the 2015 Clean the Bay Day, an

annual event to collect trash that has accumulated on the Chesapeake Bay and its tributaries. Approximately 1,000 pounds of trash and debris was collected from the 1.5 miles shoreline of NMCP's main campus.

Transferring Knowledge to the Fleet

Having received many Sailors from the Fleet who are awaiting a Physical Evaluation Board, NMCP has incorporated dozens into assisting with the management of the medical center's various waste streams (over 25 different waste streams). While some of these Sailors leave the Navy; many return to the Fleet. Upon assignment to assist with waste management, they receive Environmental Awareness Training via the Navy's Environmental Compliance, Assessment, Training, and Tracking System (ECATTS). Naval Medical Center Portsmouth's use of the ECATTS is influencing the Fleet's environmental awareness when these Sailors return to the Fleet.

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Impact/Outcomes

Naval Medical Center Portsmouth plans to continue to improve its environmental compliance and increase its pollution prevention efforts. Through weekly environmental rounds with the Executive Officer and the EPM, readily available training (i.e., electronic or in-person), and NMCP's drive to become a High Reliability Organization, NMCP will sustain its accomplishments. Accountable to its accreditation agency, The Joint Commission (TJC), which requires process improvement projects on handling waste, NMCP's vision is to be the "First and Finest" as environmental stewards.